

REMARKS

In the above referenced Office Action the Examiner rejected Claims 1, 3 and 4 under 35 U.S.C. 103(a) as being unpatentable over Engle '178 in view of Ring et al. and Kanjo et al. '812. In support of this rejection, "Re: claim 1. Engle shows in figures 1, 2, and 5 an apparatus engageable with a hand brake assembly for automatically applying at least one brake means 29 secured to a railway vehicle with said hand brake assembly, the apparatus comprising: an operating means 20, 16, 60 having a least a portion 48 thereof engageable with at least one gear 52 of a gear assembly 23B, 52, 23A (the top ends of elements 23A, 23B) disposed in a housing or unnumbered enclosure under element 54 of the hand brake assembly for operating the gear assembly in a direction which will cause an application of the at least one brake means as shown in figure 3, a source of fluid pressure 14 connected to the operating means via elements 33 and 16 and a means or line 33 connected to the source of fluid pressure 14 for initiating a supply of the predetermined pressure to the operating means, but does not disclose that the source of fluid pressure is for periodically supplying a predetermined pressure to the operating means at least sufficient to cause such application of the at least one brake means. In other words, Engle shows and discloses a brake application that is spring applied and fluid released. Ring et al. Teach in col. 8

lines 21-23 a fluid pressure applied brake. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the brake application of Engle to have been fluid applied, as taught by Ring et al., in order to provide a well-known alternate means of applying the hand brake. Engle shows in figures 1, 2, and 5 an operating means 20, 16, 60 including linkages connected to the gear assembly of the handbrake mechanism 17. Kanjo et al. '812 teach in col. 1 lines 23-25 that linkages or gears may be utilized in establishing a connection between an operating means and a handbrake mechanism. Examiner maintains that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the linkages of the operating means of Engle to have included gears, in view of the teachings of Kanjo et al. '812, in order to provide an alternate means of transferring force between the operating means and the gear : assembly of the handbrake mechanism. Re: claim 3. Engle, as modified, shows in figure 1 of Engle the use of an overload protection device 15.-

Re: claim 4. Engle, as modified, shows in figure 5 of Engle the use of at least of one valve means 60 connecting the source with the operating means." This rejection has been overcome by the incorporation into claim 1 the limitation found in claim 2 which the Examiner had indicated would be allowable if rewritten in

independent form. Accordingly, the Examiner is respectfully requested to withdraw his rejection of Claims 1, 3 and 4 under 35 U.S.C. 103(a) as being unpatentable over Engle '178 in view of Ring et al. and Kanjo et al. '812.

Next, the Examiner rejected Claims 5-9, 14, and 15 under 35 U.S.C. 103(a) as being unpatentable over Engle '178 in view of Ring et al. and Kanjo et al. '812 as applied to claims 1 and 4 above, and further in view of Kanjo et al. '363. To support this rejection, the Examiner stated, "Re: claims 5-7 and 9. Kanjo et al. teach the use of a plurality of valves including reciprocating valve 318 and valve 360 connecting the source of brake pressure 328 with an operating means 368 as shown in figure 21. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of Engle, as modified, to have included a plurality of valves, as taught by Kanjo et al., in order to provide a level of redundancy to ensure proper flow control even in the event of failure of one of the valves. Re: claim 8. Engle, as modified, shows in figure 2 of Engle an unnumbered piston between element 34 and element 35 Re: claims 14 and 15. Engle, as modified, teaches the use of an apparatus for automatically applying and releasing or controlling the supply of pressure of railway hand brakes by responding to electrical signals. See Kanjo et al. lines 8-9 of the abstract." This

rejection has also been overcome, due to the incorporation into independent Claim 1 the limitations of claim 2 which the Examiner had indicated would be allowable if rewritten in independent form since these claims find their dependency back to amended claim 1. Accordingly, the Examiner is respectfully requested to withdraw his rejection of Claims 5-9, 14, and 15 under 35 U.S.C. 103(a) as being unpatentable over Engle '178 in view of Ring et al. and Kanjo et al. '812 as applied to claims 1 and 4 above, and further in view of Kanjo et al. '363.

Additionally, the Examiner rejected Claims 12 and 13 under 35 U.S.C. 103(a) as being unpatentable over Engle '178 in view of Ring et al. and Kanjo et al. '812 as applied to claim 1 above, and further in view of Newman, II et al. In order to support this rejection, the Examiner stated, "Engle, as modified, shows the use of a manual means 17 of applying the hand brake. Newman, II et al. teach in figure 4 the use of a push button 250 as a manual means of brake application. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the pressure initiating means of the apparatus of Engle, as modified, to have included a push button, as taught by Newman, II et al., in order to provide an alternate manual means of initiating the supply of pressure." This rejection has also been overcome, due to the incorporation into independent Claim 1 the limitations of

claim 2 which the Examiner had indicated would be allowable if rewritten in independent form since these claims find their dependency back to amended claim 1. Accordingly, the Examiner is respectfully requested to withdraw his rejection of Claims 12 and 13 under 35 U.S.C. 103(a) as being unpatentable over Engle '178 in view of Ring et al. and Kanjo et al. '812 as applied to claim 1 above, and further in view of Newman, II et al.

Further, the Examiner rejected Claim 16 under 35 U.S.C. 103(a) as being unpatentable over Engle 178 in view of Ring et al. and Kanjo et al. '812 as applied to claim 1 above, and further in view of WIPO 98/28174 (Corresponding to U.S. Patent 6186602 to Jonner et al. for column and line numbers). The Examiner stated, "WIPO 98/28174 teaches the use of an overload protection means in the form of a pressure regulating means in col. 1 lines 55-56. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the overload protection means of Engle, as modified, to have included a pressure regulating means, as taught by WIPO 98/28174, in order to provide a means to prevent the occurrence of excessive brake application forces which would result in damage to the apparatus." It is further believed that this rejection has been overcome, due to the incorporation into independent Claim 1 the limitations of claim 2 which the Examiner had indicated would be allowable if rewritten in

independent form since this claim finds its dependency back amended claim 1. Accordingly, the Examiner is respectfully requested to withdraw his rejection of Claim 16 under 35 U.S.C. 103(a) as being unpatentable over Engle 178 in view of Ring et al. and Kanjo et al. '812 as applied to claim 1 above, further in view of WIPO 98/28174 (Corresponding to U.S. Pat. 6186602 to Jonner et al.).

In addition, the Examiner rejected Claim 17 under 35 U.S.C. 103(a) as being unpatentable over Engle '178 in view of Ring et al. and Kanjo et al. '812 as applied to claim 1, and further in view of Budzich. He stated, "Budzich teaches the use of a clutch to serve as an overload protection means in lines 16 of the abstract. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the overload protection means of Engle, as modified to have included a slip clutch, as taught by Budzich, in order to provide an alternate means of preventing the occurrence of excessive brake application forces which would result in damage to the apparatus." It is likewise believed that this rejection has been overcome, due to the incorporation into independent Claim 1 the limitations of claim 2 which the Examiner indicated would be allowable if rewritten in independent form since this claim finds its dependency back to amended claim 1. Accordingly, the Examiner is respectfully requested to withdraw

his rejection of Claim 17 under 35 U.S.C. 103(a) as being unpatentable over Engle '178 in view of Ring et al. and Kanjo et al. '812 as applied to claim 1, and further in view of Budzich.

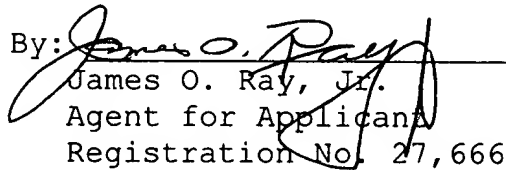
Finally, the Examiner rejected Claim 30 under 35 U.S.C. 103(a) as being unpatentable over Barefoot in view of Engle '178. In support of this rejection, the Examiner stated, "Barefoot shows in figure 7 an apparatus for automatically applying at least one brake means secured to a railway vehicle, the apparatus comprising: a motor means 60 having a rotatable shaft 62 carrying a gear member 64 thereon, the gear member engageable with at least one gear 66 of a gear assembly, and as best shown in figure 4 a means 84, 86, 88 consisting of a microprocessor and transducers connected to the motor via 72, 76, 78, 80 for starting the motor and thereby initiating an automatic application of the at least one brake means, but does not disclose the use of the apparatus with a hand brake assembly. Engle teaches in figures 1 and 2 the use of automatic brake application apparatus associated with a hand brake assembly for a railway vehicle. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized the automatic braking apparatus of Barefoot in a railway hand brake assembly, as taught by Engle, in order to effect automatic braking of a railway hand brake. It would have been obvious to one of, ordinary skill in the art at

the time the invention was made to have constructed the hand brake assembly of Barefoot, as modified, with a housing in order to protect the components from dust and other forms of contamination." Claim 30 has been amended to specifically recite that is an electrically operated hand brake. Barefoot's apparatus on the other hand only uses a motor to activate a hydraulic system for application of the brakes. Accordingly, the Examiner is respectfully requested to withdraw his rejection of claim 30 under 17 under 35 U.S.C. 103(a) as being unpatentable over Engle '178 in view of Ring et al. and Kanjo et al. '812 as applied to claim 1, and further in view of Budzich.

In view of the above amendments to the claims and the remarks associated therewith it is respectfully submitted that Claims 1 and 3-30 are in condition for allowance and such allowance on the part of the Examiner is respectfully requested.

In the event the Examiner has further difficulties with the allowance of the application, he is invited to contact the undersigned attorney by telephone at (412)380-0725 to resolve any remaining questions or issues by interview and/or by Examiner's amendment as to any matter that will expedite the completion of the prosecution of the application.

Respectfully submitted,

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APPENDIX A

1. (Thrice Amended) An apparatus engageable with a hand brake assembly for automatically applying at least one brake means secured to a railway vehicle with said hand brake assembly, said apparatus comprising:

(a) an operating means having at least one gear, said at least one gear being engageable with at least one gear of a gear assembly disposed in a housing member of said hand brake assembly for operating said gear assembly in a direction which will cause an application of said at least one brake means;

(b) a source of fluid pressure connected to said operating means for periodically supplying a predetermined pressure to said ~~operating~~ means at least sufficient to cause such application of said at least one brake means; [and]

(c) a means connected to said source of fluid pressure for initiating a supply of said predetermined pressure to said operating means thereby causing an automatic application of said at least one brake means by said hand brake assembly[.]; and

(d) a timing means connected intermediate said operating means and said source of fluid pressure for controlling said predetermined pressure being periodically supplied to said operating means.

10.(Amended) An apparatus for automatically applying at least one brake means secured to a railway vehicle with a hand brake assembly, according to claim [2] 1, wherein said source of fluid pressure is pneumatic.

30. (Twice Amended) An electrically operated apparatus engageable with a hand brake assembly for automatically electrically applying at least one brake means secured to a railway vehicle with said hand brake assembly, said electrically operated apparatus comprising:

(a) a motor means having a rotatable shaft carrying a gear member thereon, said gear member engageable with at least one gear of a ~~a~~ gear assembly disposed in a housing member of said hand brake assembly for operating said gear assembly in a direction which will cause an application of said at least one brake means; and

(b) a means connected to said motor for starting said motor and thereby initiating an automatic electrical application of said at least one brake means by said hand brake assembly.